

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Wireless Telecommunications Bureau)	WT Docket No. 11-186
Seeks Comment on the State of Mobile)	
Wireless Competition)	

REPLY COMMENTS OF CTIA-THE WIRELESS ASSOCIATION®

CTIA-The Wireless Association® hereby submits the following reply comments in response to the March 14, 2012 *Public Notice* by the Federal Communications Commission (“Commission” or “FCC”) requesting updated, year-end data and information on mobile wireless competition for the FCC’s Sixteenth Annual Report on the State of Competition in Mobile Wireless.¹ The record in this proceeding, including the data provided here and in CTIA’s original comments and reply comments,² demonstrates that the wireless marketplace has been, and continues to be, dynamic, innovative and robustly competitive. Capital investment increased, cell site deployment expanded, the number of smartphones increased, network upgrades continued, data usage increased, the number of subscribers swelled, and yet costs went down. An objective and rational evaluation of the wireless marketplace leads to the conclusion that effective competition exists.

¹ Wireless Telecommunications Bureau Seeks Updated, Year-End 2011 Data for its Sixteenth Report on Mobile Wireless Competition, *Public Notice*, WT Docket No. 11-186, DA 12-405 (March 14, 2012), available online at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0314/DA-12-405A1.pdf.

² Comments of CTIA-The Wireless Association®, WT Docket No. 11-186 (filed Dec. 5, 2011); Reply Comments of CTIA-The Wireless Association®, WT Docket No. 11-1186 (filed Dec. 20, 2011).

Earlier this month, CTIA reported the results of its 55th semi-annual survey of the U.S. wireless industry, making possible the submission of some of the requested data through year-end 2011.³ The data submitted herein demonstrate that, as a result of strong competition throughout the entire wireless ecosystem, the U.S. wireless marketplace leads the world in driving value for consumers. U.S. wireless carriers make efficient use of available spectrum and generate the lowest revenue per minute among the countries in the Organisation for Economic Cooperation and Development (“OECD”), yet lead the world in wireless investment.

As CTIA has previously noted, the U.S. wireless marketplace has evolved into a “virtuous cycle” driven by competition, innovation and investment. Within the virtuous cycle, new spectrum spurs the roll-out of new services, these services fuel the construction of advanced networks, advanced networks stimulate the development of innovative devices and operating systems featuring new capabilities, new devices and operating systems spur the creation of novel applications and content, and applications and content result in increased consumer demand and adoption. This cycle, driven by competition, not regulation, has produced immense benefits for U.S. consumers who enjoy some of the most ubiquitous, least expensive and most advanced mobile services in the world.

³ See CTIA-The Wireless Association® Semi-Annual Survey Shows Significant Demand by Americans for Wireless Broadband, April 13, 2012, available online at <http://www.ctia.org/media/press/body.cfm/prid/2171> (“CTIA Semi-Annual Survey Press Release”) and attached hereto at Exhibit A. CTIA’s semi-annual wireless industry survey has maintained a consistent trend-line of the wireless industry, with the most recent survey reflecting the reported aggregate results for wireless companies serving 95% of all estimated active revenue-generating units (also known as “subscribers” or “connections”) at the end of the survey period, December 31, 2011. The voluntary survey has a strong response rate and captures data reflecting both CTIA member and non-member companies, including service providers of all sizes: Tier 1 (nationwide), Tier 2 (regional, with more than 500,000 subscribers each), and Tier 3 (non-nationwide providers with fewer than 500,000 subscribers each), as well as capturing MVNO-related statistics.

CTIA encourages the Commission, in its consideration of wireless competition for the *Sixteenth Report*, to find, based on the data provided herein, that the wireless industry has been, and remains, subject to effective competition throughout all sectors of the U.S. market.

Total Subscriber Connections:

Consumers clearly are enjoying the wireless ecosystem, as subscriber numbers continue to climb. Indeed, in 2011, the number of subscriber connections in the United States (including U.S. territories) exceeded the population – for the first time – meaning that consumers were using more than one wireless device. The total estimated number of active revenue-generating wireless connections reached 331.6 million at year-end 2011, up 6.6% year-over-year. This figure equals 104.6% of the U.S. population.⁴

CTIA’s subscriber count includes both postpaid and prepaid or “pay-as-you-go” subscribers. Total estimated active prepaid / pay-as-you-go subscribership (including both facilities-based providers’ branded customers, and MVNOs’ branded customers) totaled 71,593,069 as of year-end 2011, equal to 22.6% of the total U.S. population and to 21.6% of all active revenue-generating subscribers as of the end of the survey period.⁵

Capital Investment:

In spite of the difficult economic environment, U.S. consumers continued to benefit from investments in advanced networks as carriers deploy and upgrade network technology. Ongoing investment in advanced networks by wireless providers is at the core of wireless competition. Investment by wireless service providers kept pace last year, and even slightly exceeded the prior

⁴ See CTIA Semi-Annual Survey Press Release, *op cit*.

⁵ See CTIA-The Wireless Association®’s Prepaid Wireless Service in the United States, A Snapshot from CTIA Based on CTIA’s Semi-Annual Wireless Industry Survey Results (forthcoming).

year, with participating companies reporting \$25.3 billion in incremental capital investment in 2011. This is an increase of 1.7% from \$24.9 billion for 2010. Cumulative capital investment rose 8.2% over 2010's year-end total, and now totals \$335.3 billion.⁶ This investment excludes the cost of spectrum, whether acquired from the FCC through the auction process, or through other transactions.

Cell Sites:

In addition to spectrum, a key component of the delivery of mobile service is the deployment of cell sites, without which broadband cannot be rolled out. In 2011, the number of cell sites increased dramatically. It is evident that wireless facilities cannot be constructed until the requisite, and often numerous, local, state and federal approvals are obtained. CTIA commends the positive steps taken to date by the Commission. In its *Shot Clock Declaratory Ruling*, the Commission clarified what constitutes a reasonable period of time for local zoning authority action on wireless facilities applications. The Commission also has worked to provide pole-top access on a timely basis to utility infrastructure for wireless attachments, and opened a proceeding squarely aimed at concrete steps to accelerate broadband deployment.

These steps have resulted in impressive infrastructure buildout. Wireless companies reported 283,385 cell sites in commercial operation at year-end 2011, up by 30,299 from 2010.⁷ That's the biggest single annual increase in history, and amounts to a 12% increase in reported cell sites in operation.

⁶ *Id.*

⁷ *Id.*

Usage:

True to the “virtuous cycle” of the wireless ecosystem, the investment in network infrastructure highlighted above and device innovation and competition described below continues to drive increased usage. Reported wireless data traffic for 2011 grew 123% (more than 100% for the third time in a row) and now amounts to more than 866 billion megabytes a year. Voice and text traffic also showed year-over-year increases, to total more than 2.2 trillion MOUs and 2.3 trillion SMS messages for the year.⁸ These figures alone should encourage the FCC to implement the recently-passed spectrum law as soon as possible to meet the National Broadband Plan’s goal of bringing 300 MHz of spectrum to market by 2015 and thereby ensure that the United States’ wireless industry remains the world’s leader in innovation.

Active Devices:

Increased consumer demand and usage, coupled with fierce competition in the dynamic device segment of the mobile wireless marketplace, has driven innovation and growth in active wireless devices. The CTIA survey includes questions regarding the capabilities or nature of various devices on the participating service providers’ networks at the end of each survey period. Participating carriers reported 295 million wireless data-capable devices on their networks at year-end, equal to 95% of all reported units. This represents an increase from 270 million reported as of year-end 2010. More than 111.5 million of those reported devices are smartphones, and more than 20.2 million are wireless-enabled laptops, tablets, or wireless broadband modems. Both of these categories grew by more than 40% year-over-year: Smartphones by 43%, and wireless tablets, laptops, etc., by 49%.⁹

⁸ See CTIA Semi-Annual Survey Press Release, *op cit.*

⁹ See CTIA Semi-Annual Survey Press Release, *op cit.*

Data Revenues:

Total reported annual wireless data revenues grew 25% to exceed \$62.7 billion, and now account for 37% of reported wireless service revenues. Total reported annual wireless service revenues rose 6.2% from 2010, reaching \$169.8 billion for the year.¹⁰

International Comparisons

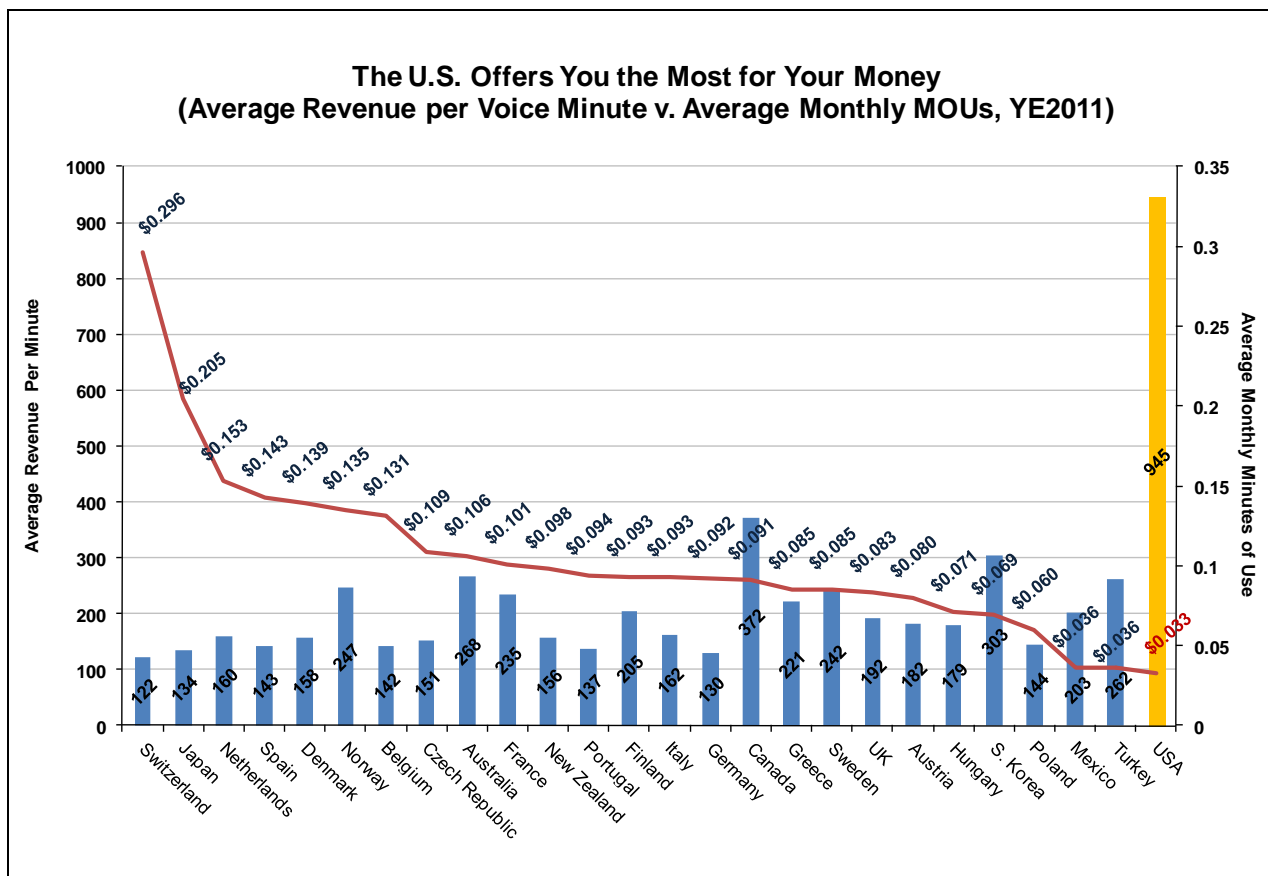
The U.S. wireless industry continues to make incredibly efficient use of spectrum in its provision of wireless services. Although CTIA does not itself track international markets, several third-parties conduct and publish such measurements. Bank of America Merrill Lynch's Global Wireless Matrix report providing data through year-end 2011 was published on April 19th, 2012, and includes data regarding subscribership, Minutes of Use (MOUs), average revenue per minute, and market concentration, among other metrics.¹¹

The table below compares MOUs and the average revenue per minute across 26 member countries of the Organisation for Economic Co-operation and Development ("OECD"), showing that as of year-end 2011 wireless customers in the U.S. used the most voice minutes, and paid the lowest average revenue per minute among these countries.¹²

¹⁰ See CTIA's *Wireless Industry Indices, Semi-Annual Data Survey Results: A Comprehensive Report from CTIA Analyzing the U.S. Wireless Industry, Year-End 2011 Results* ("CTIA Semi-Annual Report 2011") (forthcoming).

¹¹ See Glen Campbell, et al., *Global Wireless Matrix 1Q12: What happened to revenue growth?* Bank of America Merrill Lynch, April 19, 2012.

¹² See also Exhibit B.



Source: Bank of America Merrill Lynch

The U.S. mobile wireless marketplace continues to be one of the most competitive and least concentrated in the world. The table below shows the relative level of market concentration across 28 countries, based upon subscriber data published in the Global Wireless Matrix.¹³ As CTIA has noted before, the Herfindahl-Hirschman Index (HHI) is not in and of itself a direct indicator of competition, but rather a measure of market concentration. The most recent figures show that the U.S. remains the least concentrated wireless market among these 28 countries by a significant margin.

¹³ This data is supplemented by reference to the Canadian Wireless Telecommunications Association (CWTA), the Japanese Telecommunications Carriers Association (TCA), and selected individual wireless operator releases. See e.g., CWTA Statistics at <http://cwta.ca/facts-figures/>, and TCA statistics at <http://www.tca.or.jp/english/database/2011/12/index.html>. In addition to the TCA statistics, the year-end 2011 report of eAccess was relied upon for additional mobile figures. See eAccess Ltd. Results of Operations and Financial Statement as of and for the Nine Months Ended December 31, 2011, available online at http://www.eaccess.net/press_img/10155_pdf.pdf at 3.

Wireless Mobile Competition in OECD Countries, 4Q 2011									
HHI Values									
Number of Operators	1	2	3	4	5	6	7	All Others	HHI Sum
Australia	1,981.4	1,009.6	562.3	0.0	0.0	0.0	0.0	0.0	3,553.3
Austria	1,653.1	980.8	371.3	76.7	0.0	0.0	0.0	0.0	3,081.9
Belgium	1,705.6	1,057.7	685.3	0.0	0.0	0.0	0.0	0.0	3,448.6
Canada#	1,303.3	825.0	805.8	4.8	3.7	2.4	0.0	0.0	2,945.0
Chile	1,527.2	1,463.6	513.6	0.0	0.0	0.0	0.0	0.0	3,504.5
Czech Republic	1,557.2	1,313.5	590.3	0.0	0.0	0.0	0.0	0.00	3,461.0
Denmark	2,107.0	692.8	349.8	82.4	0.0	0.0	0.0	0.0	3,231.9
Finland	1,590.4	1,240.1	620.2	0.0	0.0	0.0	0.0	0.0	3,450.8
France**	2,244.1	1,227.5	309.5	0.0	0.0	0.0	0.0	0.0	3,781.1
Germany	1,086.9	962.3	396.2	259.4	0.0	0.0	0.0	0.0	2,704.8
Greece	2,609.7	729.5	479.8	0.0	0.0	0.0	0.0	0.0	3,819.1
Hungary	2,163.6	886.4	562.3	0.0	0.0	0.0	0.0	0.0	3,612.3
Israel	1,175.7	849.7	1,057.4	16.4	0.0	0.0	0.0	0.0	3,099.2
Italy	1,217.2	1,050.6	517.5	99.0	0.0	0.0	0.0	0.0	2,884.3
Japan##	2,136.6	706.99	465.7	11.2	5.1	0.0	0.0	0.0	3,325.5
Korea	2,557.4	995.0	319.9	0.00	0.0	0.0	0.0	0.0	3,872.3
Mexico	4,967.2	448.8	19.1	15.7	0.0	0.0	0.0	0.0	5,450.8
Netherlands	1,744.7	907.4	790.0	0.0	0.0	0.0	0.0	0.0	3,442.1
New Zealand	2,103.1	1,481.3	245.0	0.0	0.0	0.0	0.0	0.0	3,829.4
Norway	2,873.4	797.1	329.9	0.0	0.0	0.0	0.0	0.0	4,000.4
Poland	874.6	816.3	760.6	203.8	0.0	0.0	0.0	0.0	2,655.3
Portugal	1,830.0	1,303.0	446.3	0.0	0.0	0.0	0.0	0.0	3,579.2
Spain	1,777.1	947.7	473.5	28.1	0.0	0.0	0.0	0.0	3,226.4
Sweden	2,145.7	752.1	265.8	99.0	0.0	0.0	0.0	0.0	3,262.6
Switzerland	3,873.7	447.5	275.8	0.0	0.0	0.0	0.0	0.0	4,597.0
Turkey	2,792.1	759.3	384.3	0.0	0.0	0.0	0.0	0.0	3,935.7
United Kingdom**	1,286.3	832.0	632.6	102.8	0.0	0.0	0.0	0.0	2,853.6
United States**	1,056.8	969.5	275.3	100.2	7.9	3.2	3.2	11.4	2,427.4

Sources: Bank of America Merrill Lynch Global Wireless Matrix 1Q2012, CTIA Research, Canadian Wireless Telecommunications Association (CWTA), Japanese Telecommunications Carriers Association (TCA), and carrier investor releases.

#Source CWTA

##Source Japanese TCA and eAccess Ltd., including PHS.

**Recalculated by CTIA Research.

As reflected in the table below, the United States is one of only three OECD countries tracked by Bank of America Merrill Lynch with five or more mobile wireless carriers competing in its wireless market. Of the remaining OECD countries tracked by Bank of America Merrill Lynch, 15 have only three key mobile wireless carriers and 10 have only four mobile wireless carriers.

Number of Carriers in OECD Countries, 4Q 2011		
Three Mobile Carriers	Four Mobile Carriers	Five or More Mobile Carriers
Australia	Austria	Canada
Belgium	Denmark	Japan*
Chile	Germany	USA
Czech Republic	Israel	
Finland	Italy	
France	Mexico	
Greece	Poland	
Hungary	Spain	
Korea	Sweden	
Netherlands	UK	
New Zealand		
Norway		
Portugal		
Switzerland		
Turkey		

Sources: Bank of America Merrill Lynch Global Wireless Matrix 1Q2011, CWTA, Japanese TCA, eAccess.

*Including PHS

Conclusion

CTIA reiterates that any rational analysis of the wealth of data provided by CTIA and other commenters—including carriers, industry associations, manufacturers, and operating system developers—leads to the conclusion that the wireless ecosystem is by its nature competitive, spurring innovation to the benefit of U.S. consumers. CTIA hopes that the

foregoing information will be of assistance to the Commission in compiling its annual report to Congress on the state of the wireless industry in the U.S. as of 2011 and urges the Commission to rely upon the record before it and find in the *Sixteenth Report* that the mobile wireless market is subject to effective competition throughout all sectors of the U.S. market.

Respectfully submitted,

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EXHIBIT A

Background on CTIA's Semi-Annual Wireless Industry Survey

CTIA-The Wireless Association®'s Semi-annual wireless industry survey develops industry-wide information drawn from operational member and non-member wireless service providers. It has been conducted since January 1985, originally as a cellular-only survey instrument, and now including PCS, ESMR, AWS and 700 MHz license holders. No break-out of results specific to spectrum bands or licenses is performed.

The information solicited from the service providers includes: direct employment, number of cell sites, total service revenues, roaming revenues as a subset of total service revenues, the average local monthly bill, and the average length of call. The average local monthly bill is developed on a weighted basis, to avoid skewing the figures. It is not an average of averages. No adjustments are made to these figures.

The CTIA survey also develops information on the number of reported wireless service subscribers or "connections" for the responding systems, and an estimated total wireless connections figure (taking into account non-responding systems). Because the CTIA survey is a voluntary survey, it cannot compel responses from wireless carriers. However, the survey has an excellent response rate. For the December 31, 2011, installment of the semi-annual survey, CTIA received responses from companies serving more than 95 percent of all estimated wireless subscribers.

Because not all systems do respond, CTIA develops an estimate of total wireless connections. The estimate is developed by determining the identity and character of non-responding markets or operators (*e.g.*, RSA/MSA or equivalent-market designation, age of system, market population), and using surrogate penetration and growth rates applicable to similar, known systems to derive probable subscribership. These numbers are then summed with the reported subscriber connection numbers to reach the total estimated figures. No carrier-specific or market-specific information is maintained as a result of the survey. All such information is aggregated by an independent accounting firm to a nationwide level. The underlying source material for the survey is then destroyed per confidentiality agreements.

The following tables and charts reflect selected top-of-the-line data. Complete results of CTIA's semi-annual survey are available for purchase in the comprehensive report, *CTIA's Wireless Industry Indices: 1985 – 2011*, including data on revenues, subscriber usage, investment, and other operational indicators and ratios. The report is available for a member price of \$850 and a non-member price of \$1,075. Subsequent copies are available to members at \$475 each and to non-members at \$535 each. Annual subscriptions are available at a member price of \$1,445 and non-member price of \$1,825. The report may be ordered by contacting research@ctia.org or by ordering directly from CTIA's Research eStore at http://www.ctia.org/store/producttypeperesults.cfm?group_id=1. Order forms are also available on CTIA's web site, at http://files.ctia.org/pdf/Indices_Order_Form1.pdf.

CTIA-THE WIRELESS ASSOCIATION®
ANNUALIZED WIRELESS INDUSTRY SURVEY RESULTS - DECEMBER 1985 TO DECEMBER 2011

Date	Estimated Total Connections	Twelve-Month Total Service Revenues (in \$000s)	12-Month Roamer Revenues (in \$000s)	Cell Sites	Direct Service Provider Employees	Average Local Monthly Bill (Dec. Survey Periods)	Average Local Call Length (Dec. Survey Periods)
1985	340,213	\$482,428	N/A	913	2,727	N/A	N/A
1986	681,825	\$823,052	N/A	1,531	4,334	N/A	N/A
1987	1,230,855	\$1,151,519	N/A	2,305	7,147	\$96.83	2.33
1988	2,069,441	\$1,959,548	N/A	3,209	11,400	\$98.02	2.26
1989	3,508,944	\$3,340,595	\$294,567	4,169	15,927	\$89.30	2.48
1990	5,283,055	\$4,548,820	\$456,010	5,616	21,382	\$80.90	2.20
1991	7,557,148	\$5,708,522	\$703,651	7,847	26,327	\$72.74	2.38
1992	11,032,753	\$7,822,726	\$ 973,871	10,307	34,348	\$68.68	2.58
1993	16,009,461	\$10,892,175	\$1,361,613	12,824	39,810	\$61.49	2.41
1994	24,134,421	\$14,229,922	\$1,830,782	17,920	53,902	\$56.21	2.24
1995	33,785,661	\$19,081,239	\$2,542,570	22,663	68,165	\$51.00	2.15
1996	44,042,992	\$23,634,971	\$2,780,935	30,045	84,161	\$47.70	2.32
1997	55,312,293	\$27,485,633	\$2,974,205	51,600	109,387	\$42.78	2.31
1998	69,209,321	\$33,133,175	\$3,500,469	65,887	134,754	\$39.43	2.39
1999	86,047,003	\$40,018,489	\$4,085,417	81,698	155,817	\$41.24	2.38
2000	109,478,031	\$52,466,020	\$3,882,981	104,288	184,449	\$45.27	2.56
2001	128,374,512	\$65,316,235	\$3,752,826	127,540	203,580	\$47.37	2.74
2002	140,766,842	\$76,508,187	\$3,895,512	139,338	192,410	\$48.40	2.73
2003	158,721,981	\$87,624,093	\$3,766,267	162,986	205,629	\$49.91	3.07
2004	182,140,362	\$102,121,210	\$4,210,331	175,725	226,016	\$50.64	3.05
2005	207,896,198	\$113,538,221	\$3,786,331	183,689	233,067	\$49.98	3.00
2006	233,040,781	\$125,456,825	\$3,494,294	195,613	253,793	\$50.56	3.03
2007	255,395,599	\$138,869,304	\$3,742,015	213,299	266,782	\$49.79	N/A
2008	270,333,881	\$148,084,170	\$3,739,274	242,130	268,528	\$50.07	2.27
2009	290,941,191*	\$152,551,854	\$3,061,344	247,081	249,247	\$48.16	1.81
2010	310,996,629*	\$159,929,648	\$3,026,009	253,086	250,393	\$47.21	1.79
2011	331,594,848	\$169,767,314	\$3,314,895	283,385	238,071	\$47.00	1.78

CTIA'S SEMI-ANNUAL WIRELESS INDUSTRY SURVEY RESULTS
DECEMBER 1985 – DECEMBER 2011

Date	Estimated Connections	Total Six-Month Revenues (\$000)	Roamer Service Revenues (\$000)	Cell Sites	Employees	Average Local Monthly Bill	Avg. Local Call Length (Min)	Avg. Roam Call Length
Dec-85	340,213	\$306,197	N/A	913	2,727	N/A	N/A	N/A
Jun-86	500,000	\$360,585	N/A	1,194	3,556	N/A	N/A	N/A
Dec-86	681,825	\$462,467	N/A	1,531	4,334	N/A	N/A	N/A
Jun-87	883,778	\$479,514	N/A	1,732	5,656	N/A	N/A	N/A
Dec-87	1,230,855	\$672,005	N/A	2,305	7,147	\$96.83	N/A	N/A
Jun-88	1,608,697	\$886,075	N/A	2,789	9,154	\$95.00	N/A	N/A
Dec-88	2,069,441	\$1,073,473	\$89,331	3,209	11,400	\$98.02	N/A	N/A
Jun-89	2,691,793	\$1,406,463	\$121,368	3,577	13,719	\$85.52	N/A	N/A
Dec-89	3,508,944	\$1,934,132	\$173,199	4,169	15,927	\$89.30	N/A	N/A
Jun-90	4,368,686	\$2,126,362	\$192,350	4,768	18,973	\$83.94	N/A	N/A
Dec-90	5,283,055	\$2,422,458	\$263,660	5,616	21,382	\$80.90	N/A	N/A
Jun-91	6,380,053	\$2,653,505	\$302,329	6,685	25,545	\$74.56	N/A	N/A
Dec-91	7,557,148	\$3,055,017	\$401,325	7,847	26,327	\$72.74	N/A	N/A
Jun-92	8,892,535	\$3,633,285	\$436,725	8,901	30,595	\$68.51	N/A	N/A
Dec-92	11,032,753	\$4,189,441	\$537,146	10,307	34,348	\$68.68	N/A	N/A
Jun-93	13,067,318	\$4,819,259	\$587,347	11,551	36,501	\$67.31	2.38	3.38
Dec-93	16,009,461	\$6,075,916	\$774,266	12,824	39,810	\$61.49	2.41	3.26
Jun-94	19,283,306	\$6,519,031	\$778,116	14,740	45,622	\$58.65	2.36	2.89
Dec-94	24,134,421	\$7,710,891	\$1,052,666	17,920	53,902	\$56.21	2.24	2.85
Jun-95	28,154,414	\$8,749,625	\$1,120,337	19,844	60,689	\$52.45	2.27	2.74
Dec-95	33,758,661	\$10,330,614	\$1,422,233	22,663	68,165	\$51.00	2.15	2.79
Jun-96	38,195,466	\$11,194,247	\$1,314,943	24,802	73,365	\$48.84	2.24	2.8
Dec-96	44,042,992	\$12,440,724	\$1,465,992	30,045	84,161	\$47.70	2.32	3.14
Jun-97	48,705,553	\$13,134,551	\$1,392,440	38,650	97,039	\$43.86	2.25	2.95
Dec-97	55,312,293	\$14,351,082	\$1,581,765	51,600	109,387	\$42.78	2.31	2.94
Jun-98	60,831,431	\$15,286,660	\$1,584,891	57,674	113,111	\$39.88	2.34	2.65
Dec-98	69,209,321	\$17,846,515	\$1,915,578	65,887	134,754	\$39.43	2.39	3.11
Jun-99	76,284,753	\$19,368,304	\$1,922,416	74,157	141,929	\$40.24	2.40	2.96

CTIA'S SEMI-ANNUAL WIRELESS INDUSTRY SURVEY RESULTS

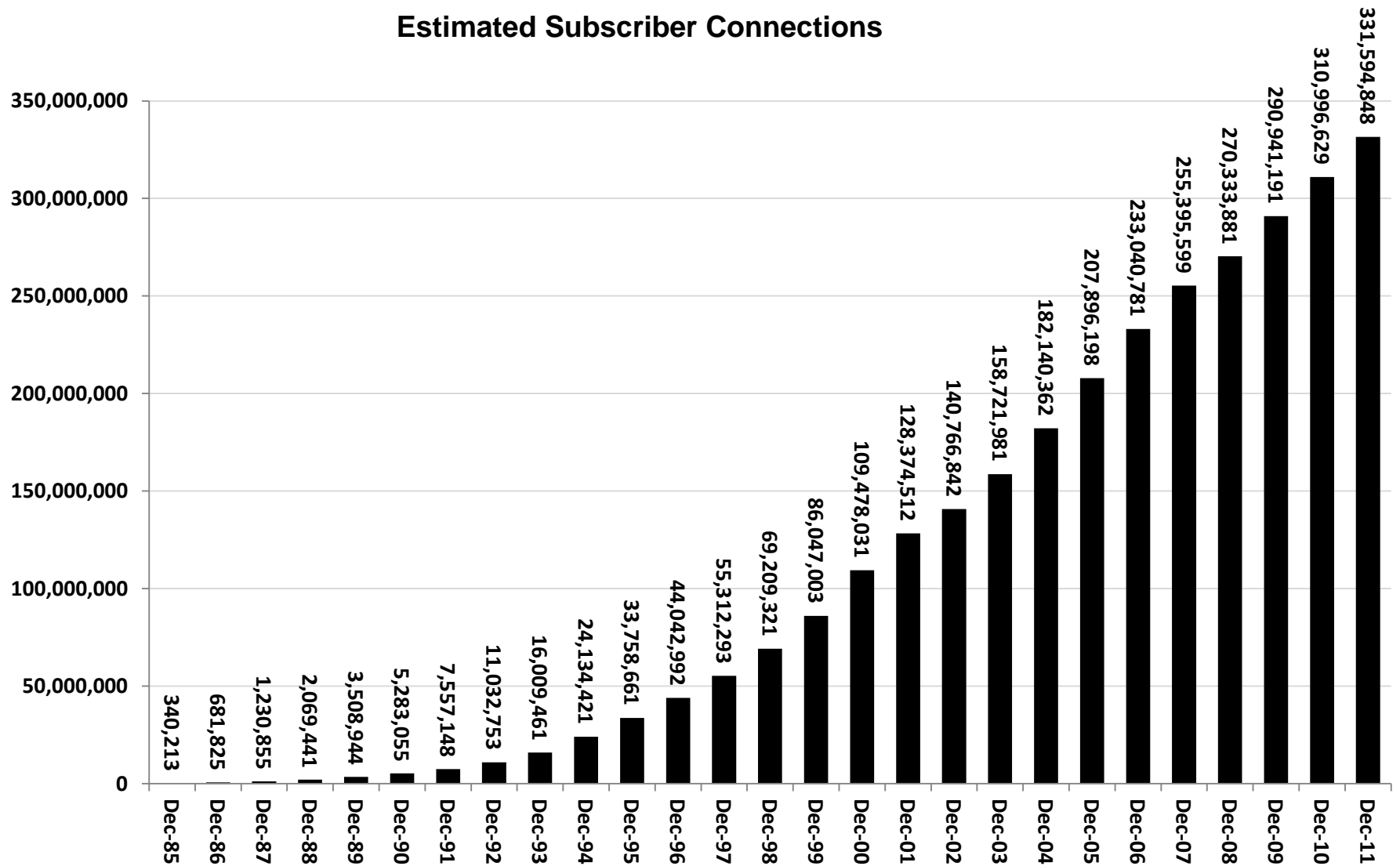
DECEMBER 1985 – DECEMBER 2011

Date	Estimated Connections	Total Six-Month Revenues (\$000)	Roamer Service Revenues (\$000)	Cell Sites	Employees	Average Local Monthly Bill	Avg. Local Call Length (Min)	Avg. Roam Call Length
Dec-99	86,047,003	\$20,650,185	\$2,163,001	81,698	155,817	\$41.24	2.38	3.11
Jun-00	97,035,925	\$24,645,365	\$1,971,625	95,733	159,645	\$45.15	2.48	3.19
Dec-00	109,478,031	\$27,820,655	\$1,911,356	104,288	184,449	\$45.27	2.56	3.23
Jun-01	118,397,734	\$30,905,721	\$1,727,058	114,059	186,317	\$45.56	2.62	3.01
Dec-01	128,374,512	\$34,410,513	\$2,205,768	127,540	203,580	\$47.37	2.74	2.94
Jun-02	134,561,370	\$36,707,086	\$1,846,267	131,350	186,956	\$47.42	2.60	3.07
Dec-02	140,766,842	\$39,801,101	\$2,049,245	139,338	192,410	\$48.40	2.73	3.11
Jun-03	148,065,824	\$41,384,171	\$1,825,243	147,719	187,169	\$49.46	2.63	3.15
Dec-03	158,721,981	\$46,239,922	\$1,941,024	162,986	205,629	\$49.91	3.07	3.45
Jun-04	169,467,393	\$49,275,671	\$2,015,799	174,368	212,186	\$49.49	3.06	3.45
Dec-04	182,140,362	\$52,845,539	\$2,194,532	175,725	226,016	\$50.64	3.05	2.80
Jun-05	194,479,364	\$55,689,208	\$1,941,960	178,025	225,162	\$49.52	3.04	2.66
Dec-05	207,896,198	\$57,849,013	\$1,844,371	183,689	233,067	\$49.98	3.00	3.36
Jun-06	219,652,457*	\$60,450,669	\$1,713,680	197,576	238,236	\$49.30	2.94	3.40
Dec-06	233,040,781	\$65,006,156	\$1,780,614	195,613	253,793	\$50.56	3.03	3.47
Jun-07	243,428,202	\$67,887,668	\$1,830,435	210,360	257,401	\$49.94	3.13	3.35
Dec-07	255,395,599	\$70,981,636	\$1,911,579	213,299	266,782	\$49.79	N/A	3.40
Jun-08	262,720,165	\$72,728,764	\$1,778,519	220,472	267,855	\$48.54	2.43	3.16
Dec-08	270,333,881	\$75,355,406	\$1,960,755	242,130	268,528	\$50.07	2.27	3.27
Jun-09	276,610,580	\$75,848,319	\$1,585,993	245,912	261,453	\$49.57	2.03	3.39
Dec-09	290,941,191*	\$76,703,534	\$1,475,351	247,081	249,247	\$48.16	1.81	3.30
Jun-10	300,520,098*	\$79,109,620	\$1,382,667	251,618	235,021	\$47.47	1.67	3.28
Dec-10	310,996,629*	\$80,820,028	\$1,643,341	253,086	250,393	\$47.21	1.79	3.28
Jun-11	322,857,207*	\$83,733,905	\$1,566,219	256,920	243,239	\$47.23	1.83	5.16
Dec-11	331,594,848	\$86,033,409	\$1,748,676	283,385	238,071	\$47.00	1.78	3.32

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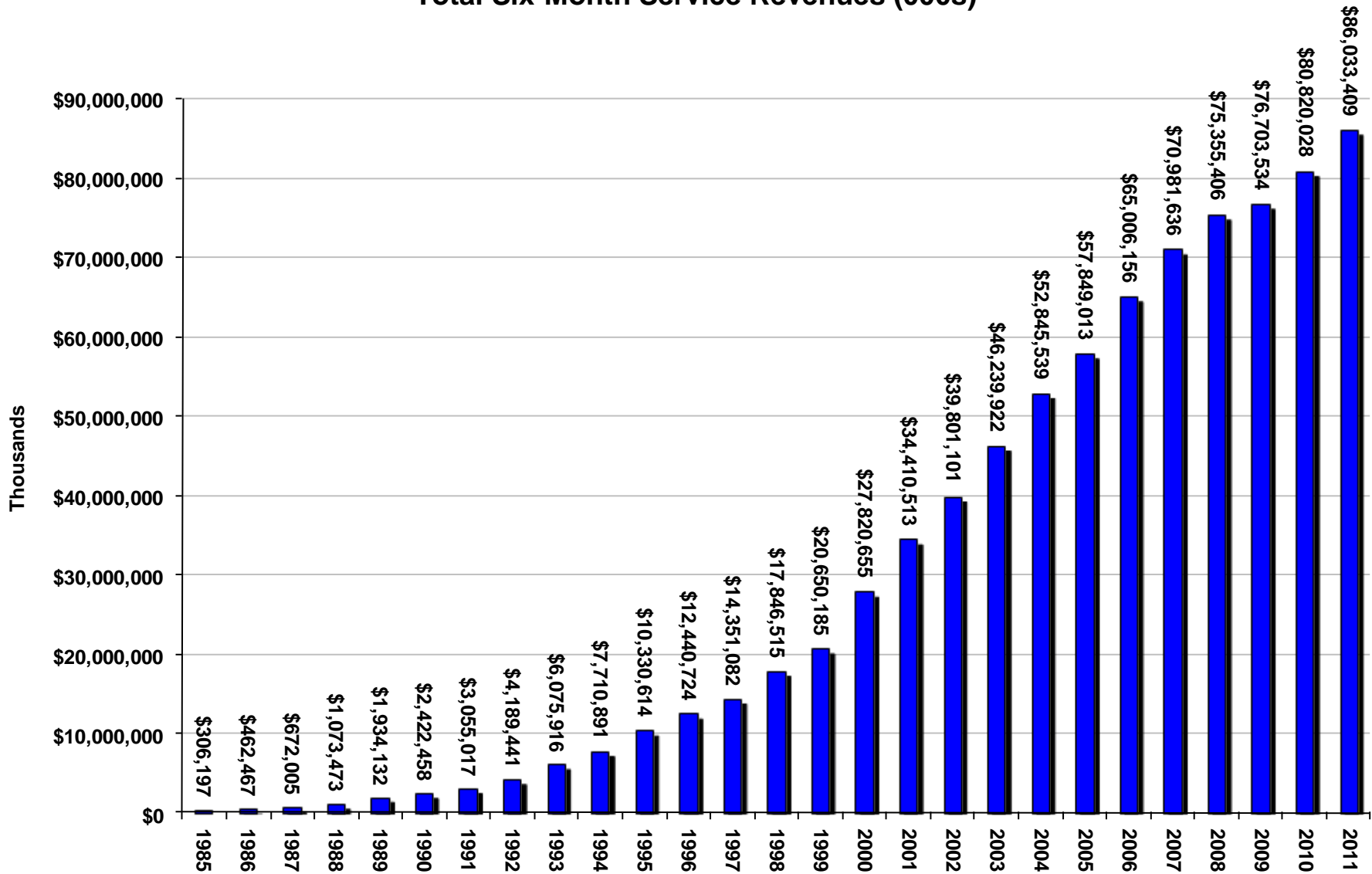
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Estimated Subscriber Connections



**Year-End 2011 Estimated Wireless Connections
Up More than 20 Million from December 2010**

Total Six-Month Service Revenues (000s)



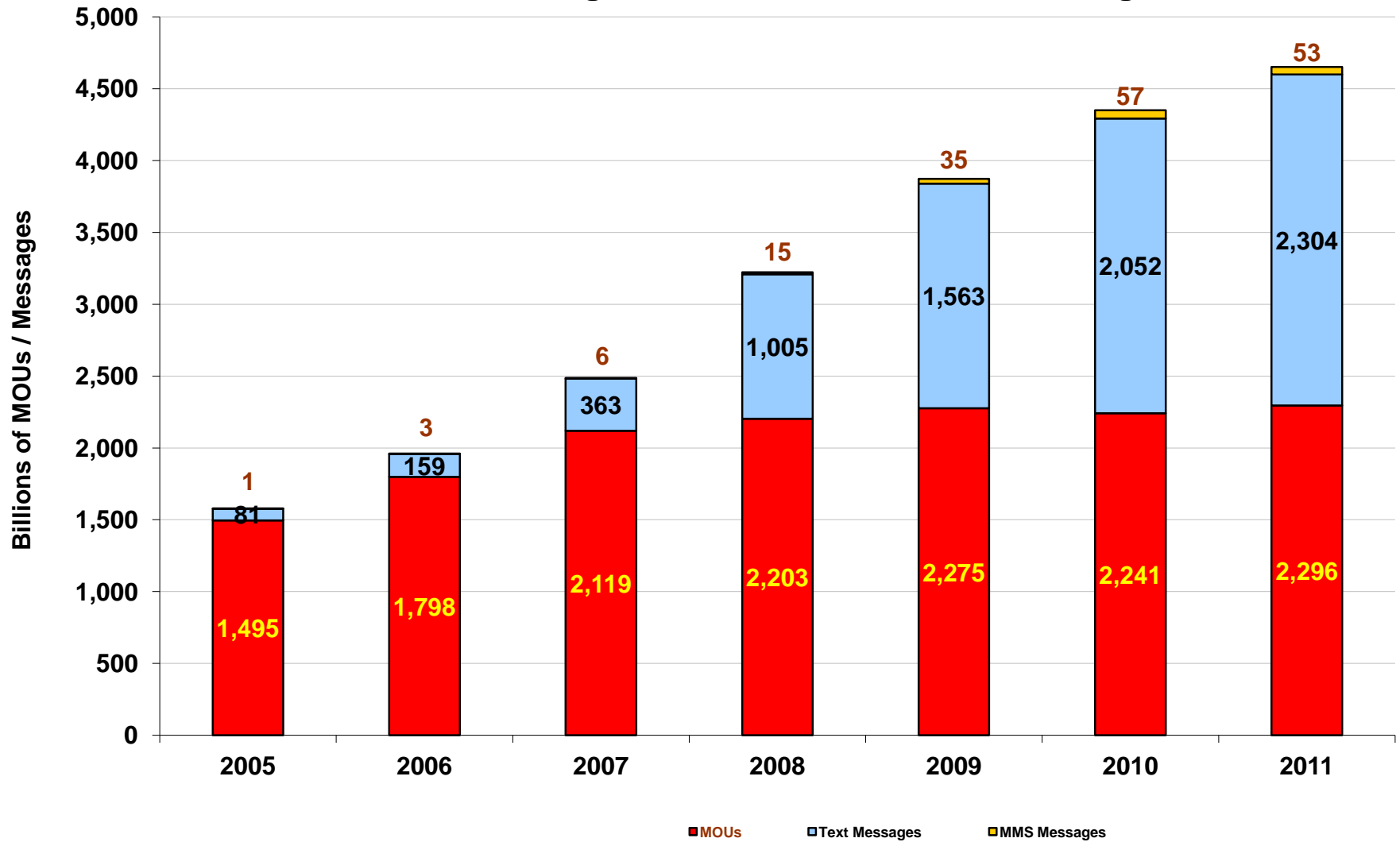
**Wireless Service Revenues Reach More Than \$86 billion for the Last Six Months of 2011
- Total Twelve-Month Revenues Reach Almost \$170 Billion in 2011**

Source: CTIA

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Minutes and Messages as a Measure of Wireless Usage



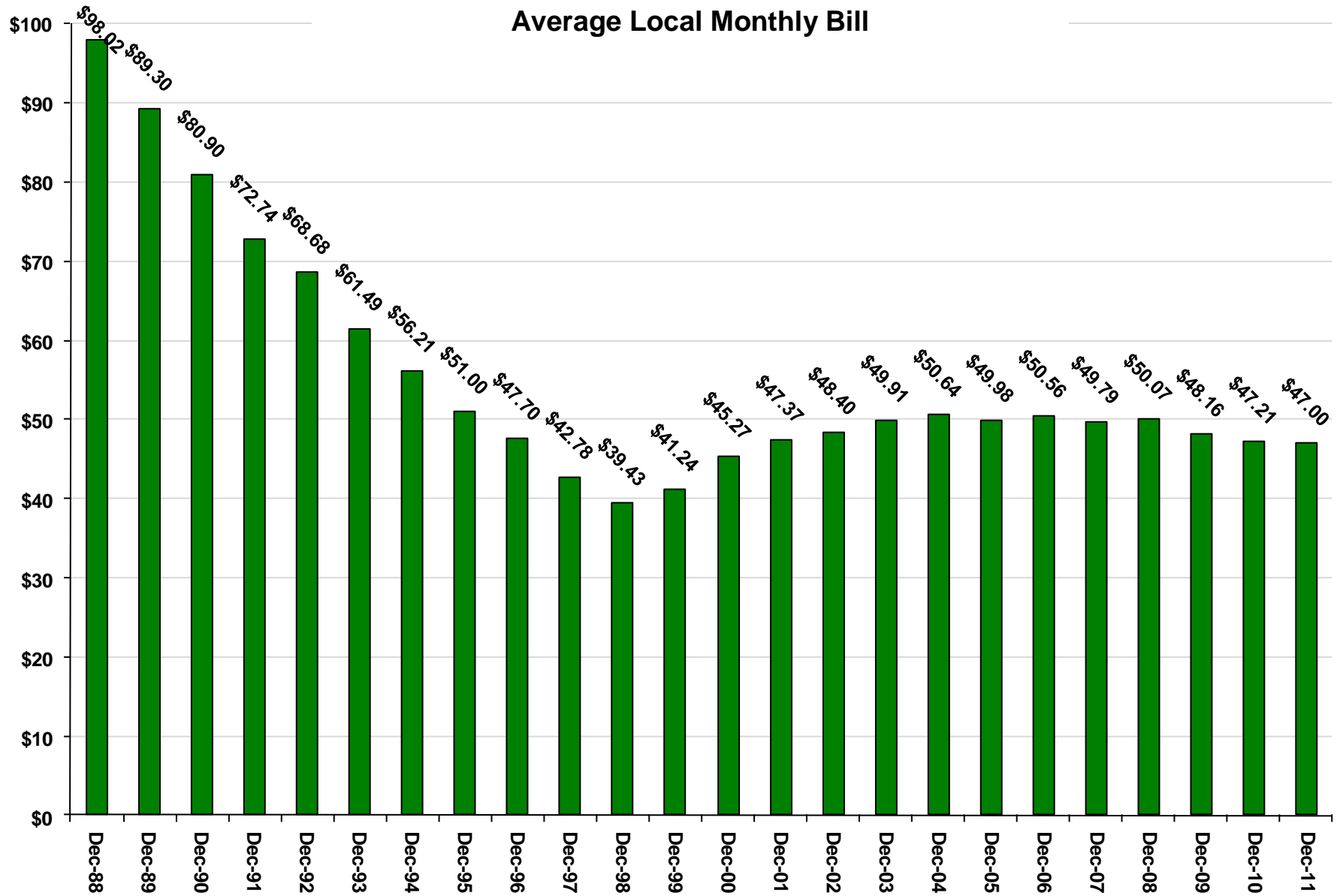
Combined Minutes and Messages Rise More than 6% Year-Over-Year

Source: CTIA

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Average Local Monthly Bill



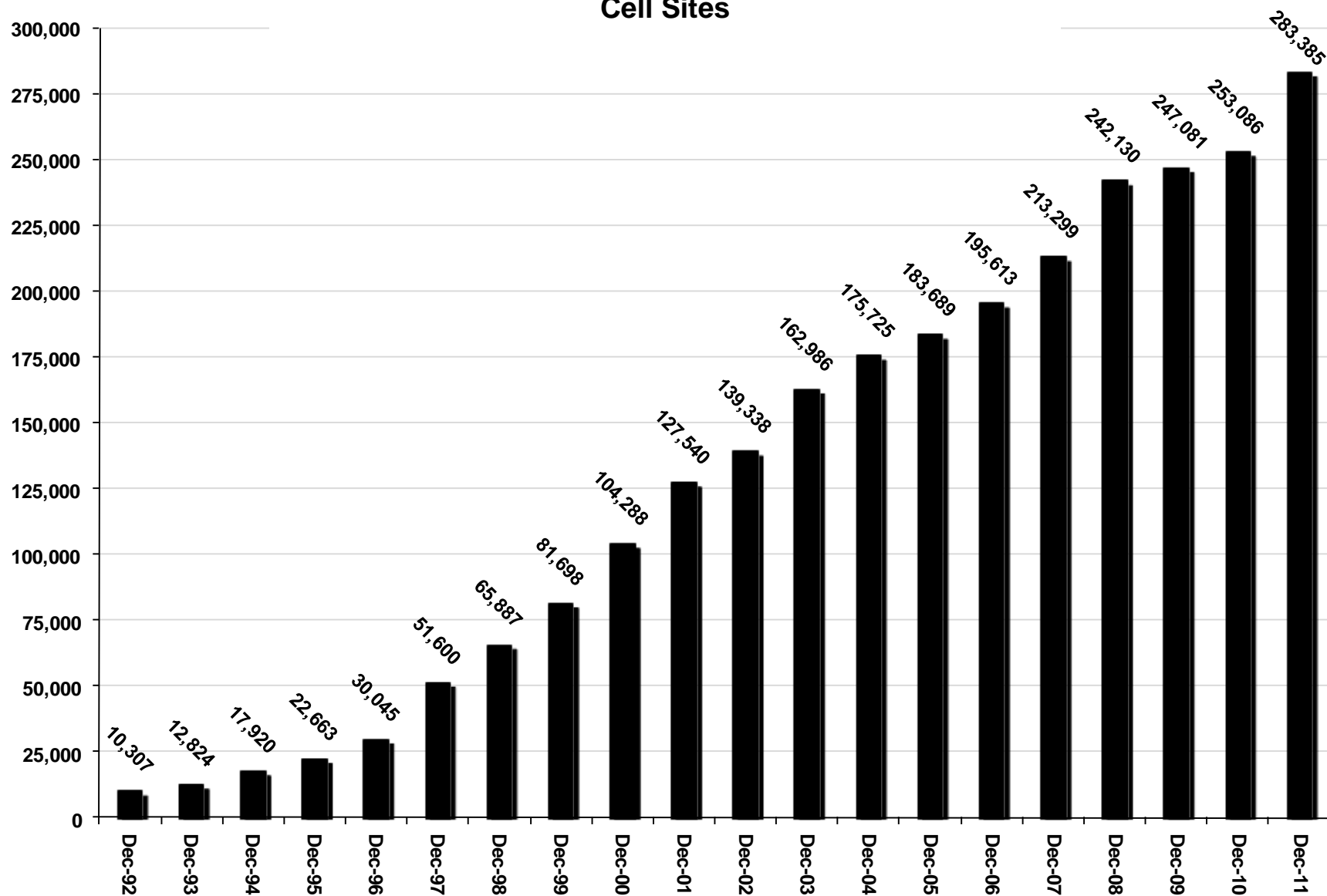
Average Local Monthly Bill Down 0.4% Year-over-Year

Source: CTIA

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Cell Sites



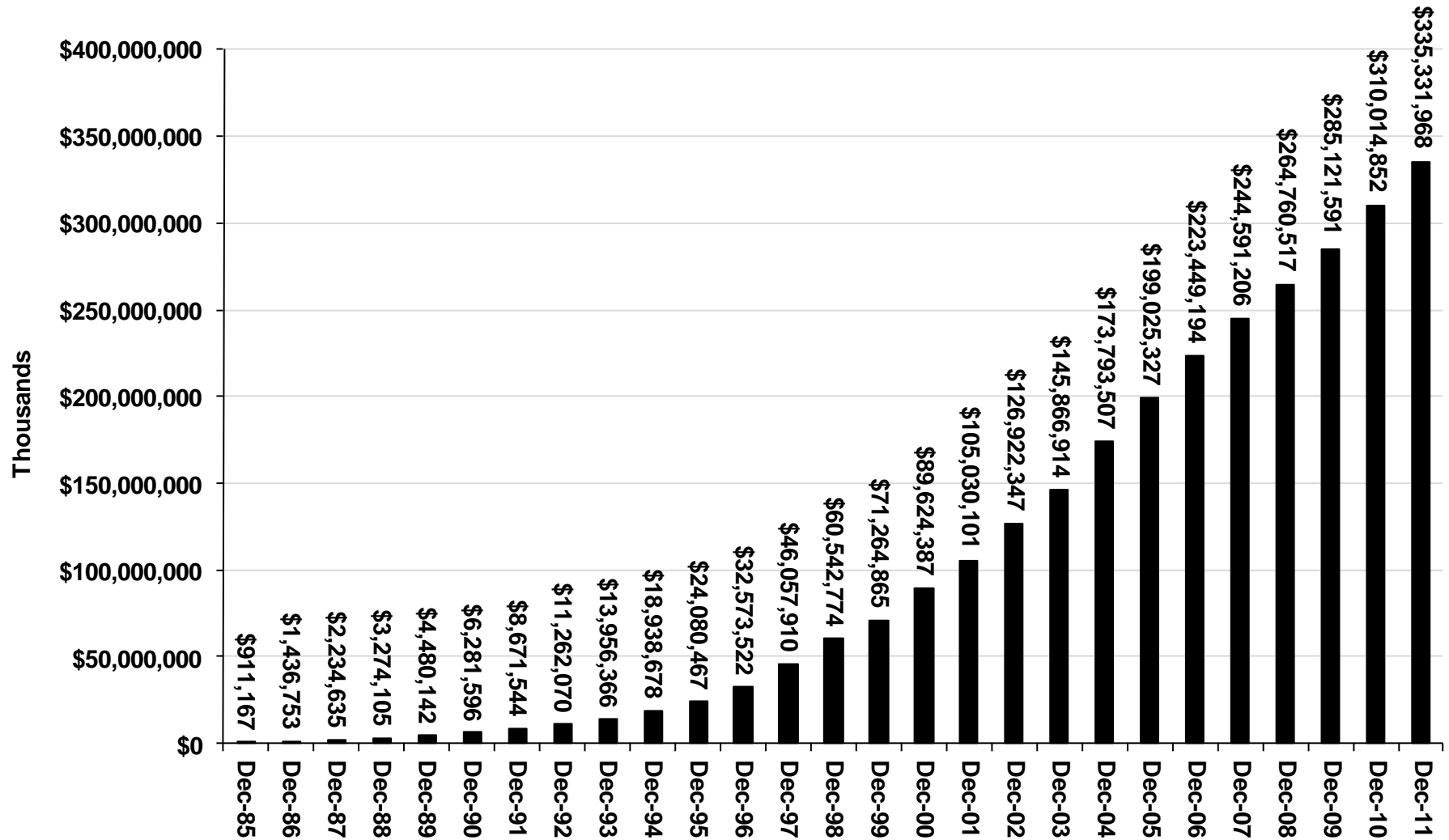
Reported Cell Sites in Service are Up 12% Year-Over-Year

Source: CTIA

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Cumulative Capital Investment Passes \$335 Billion



Cumulative Capex Rises 8.2% Year-Over-Year












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EXHIBIT B

EXHIBIT B

<div>  CTIA The Wireless Association* </div>										
Year-End 2011	 USA	 Japan	 Germany	 U.K.	 France	 Italy	 Canada	 Spain	 S. Korea	 Mexico
Subscribers**	331.6M	126.1M	114.1M	76.9M	64.3M	92.4M	26.6M	58.1M	52.5M	93.2M
Average Consumers' Minutes of Use per Month**	945	134	130	192	235	162	372	143	303	203
Average Revenue per Minute – A Measure of the Effective Price per Voice Minute**	\$0.03	\$0.21	\$0.09	\$0.08	\$0.10	\$0.09	\$0.09	\$0.14	\$0.07	\$0.04
Efficient Use of Spectrum -- Subscribers Served per MHz of Spectrum Allocated	809,755	363,401	185,528	205,067	171,467	246,400	98,519	92,960	194,444	358,462
Spectrum Assigned for Commercial Wireless Use***	409.5 MHz*	347 MHz	615 MHz	375 MHz	375 MHz	375 MHz	270 MHz	625 MHz	270 MHz	260 MHz
Potentially Usable Spectrum/In the Pipeline***	50 MHz	400 MHz	Recently auctioned 350 MHz	310 MHz	250 MHz	250 MHz	up to 200 MHz	59.6 MHz (Recently auctioned 250 MHz)	120 MHz	150 MHz